

OER-Enabled Pedagogy

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A Word About



- Founded in 2012 here in Portland, OR
- 30 people
- Services and tools to make OER adoption (1) simple and (2) effective
- CC BY license all content we create
- Saved 110k+ students \$10M in 2016
- Will save 160k+ students \$15M in 2017
- Focus on at-risk students

Why not “open pedagogy?”

“OER-enabled Pedagogy”

Open Educational Resources (OER)





Which “open”?

~~open \approx free~~



the internet is already free to
read / watch / listen to



`open` = free + permissions

The 5R Activities

Retain

- Make and own a copy

Reuse

- Use in a wide range of ways

Revise

- Adapt, modify, and improve

Remix

- Combine two or more

Redistribute

- Share with others



The 5R Activities

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Open

Free plus permission to engage in
the 5R activities

“Faux-pen”

1. Free (but gated) access
2. All Rights Reserved plus *draconian* Terms of Use

	Cost to Students	Permissions for Faculty and Students
Commercial Textbooks	Expensive	Restrictive
“The Web” MOOCs Library Resources	“Free”	Restrictive
Open Educational Resources	Free	5Rs

OER Examples

Full courses, complete textbooks,
chapters, modules, videos, simulations,
assessments, syllabi, etc.

Components of Prokaryotic Cells

All cells share four common components: 1) a plasma membrane, an outer covering that separates the cell's interior from its surrounding environment; 2) cytoplasm, consisting of a jelly-like cytosol within the cell in which other cellular components are found; 3) DNA, the genetic material of the cell; and 4) ribosomes, which synthesize proteins. However, prokaryotes differ from eukaryotic cells in several ways.

A **prokaryote** is a simple, mostly single-celled (unicellular) organism that lacks a nucleus, or any other membrane-bound organelle. We will shortly come to see that this is significantly different in eukaryotes. Prokaryotic DNA is found in a central part of the cell: the **nucleoid** ([Figure](#)).

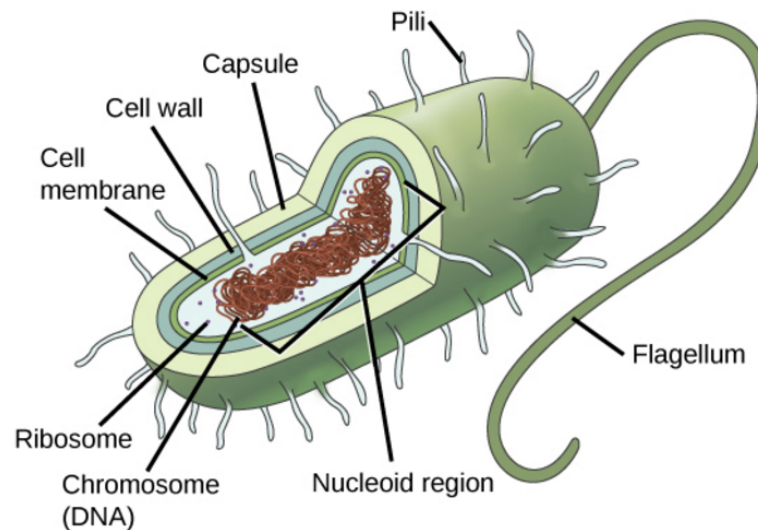
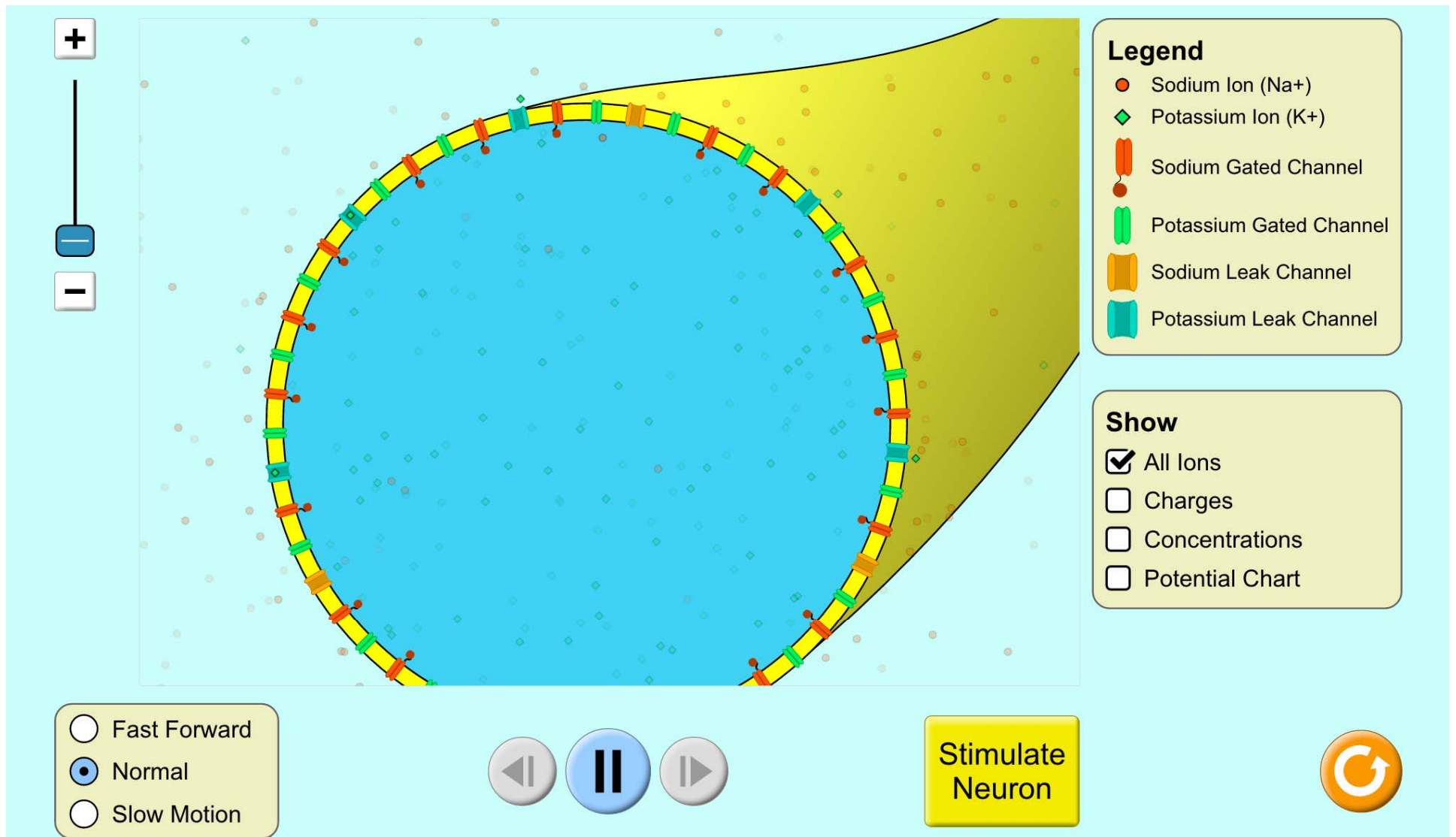


Figure 1. This figure shows the generalized structure of a prokaryotic cell. All prokaryotes have chromosomal DNA localized in a nucleoid, ribosomes, a cell membrane, and a cell wall. The other structures shown are present in some, but not all, bacteria.

Most prokaryotes have a peptidoglycan cell wall and many have a polysaccharide capsule ([Figure](#)). The cell wall acts as an extra layer of protection, helps the cell maintain its shape, and prevents dehydration. The capsule enables the cell to attach to surfaces in its



Neuron



< STATISTICAL STUDIES

Statistical questions

- ▶ Statistical and non statistical questions
- ★ Statistical questions
- ▶ **Inferring population mean from sample mean**
- ▶ Reasonable samples
- ★ Valid claims

Next tutorial
[Types of statistical studies](#)

mean height of men in the U.S.?

150m ← population mean = μ

sample: 6.2 ft, 5.5 ft, 5.75 ft
6.3 ft, 5.9 ft

$\bar{x} = 5.93 \text{ ft}$ ← statistic

sample n calculating a sample mean in an attempt

YouTube

5:35 / 10:02

Was this video helpful? ☐ Yes ☐ No

Inferring population mean from sample mean

[About](#) [Transcript](#)

Much of statistics is based upon using data from a random sample that is representative of the population at large. From that sample mean, we can infer things about the greater population mean. We'll explain. Created by Sal Khan.

Check Your Understanding: Positioning and Differentiation Definition

Choose the **BEST** answer.

The process organizations use to highlight the standout qualities of their product or service and the value it brings to a customer as compared to their competition is the definition of:

- ☐ positioning
- ☐ differentiation
- ☐ branding

How sure are you of your answer? Click below to move forward.

Just A Guess

Pretty Sure

Very Sure

Pedagogy

The theory and practice of teaching

OER-Enabled Pedagogy

The set of teaching and learning practices only possible or practical when you have permission to engage in the 5R activities.

Why OER-Enabled Pedagogy?

1. We learn by the things we do.
2. Copyright restricts what we are permitted to do.
3. Consequently, copyright restricts the ways we are permitted to learn.
4. Open removes these restrictions, permitting us to do new things.
5. Consequently, open permits us to learn in new ways.

“OER-enabled”

Not it's own form of pedagogy

“OER-enabled”

What do the 5R activities enable in the context of your preferred pedagogy?

“OER-enabled”

Should be used as a modifier with
“real” pedagogies

“OER-enabled”

OER-enabled *constructionist* pedagogy

Constructionist Pedagogy

We learn best when we're "actively engaged in constructing something that has personal meaning to [us] - be it a poem, a robot, a sandcastle, or a computer program."

- Seymour Papert

Constructionist Pedagogy

Learning “happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity.”

- Seymour Papert

	Student creates an artifact	Artifact has personal meaning for student	Artifact is shared publicly	Artifact is shared under an open license
Disposable	X			
Authentic	X	X		
Constructionist	X	X	X	
Renewable	X	X	X	X

OER-E Constructivist Pedagogy

From knowledge “consumers” to
knowledge creators

OER-E Constructivist Pedagogy

From knowledge “consumers” to
knowledge creators

From knowledge creators to
enabling *other* knowledge creators

OER-ECP

Examples

Medical School Students

- UCSF Expanding WikiProject Medicine - https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Medicine/UCSF_Elective_2013

Graduate Students

- District Policies Regarding Blogs and Wikis - https://www.youtube.com/watch?v=4_Lk2uU_eIU
- PM4ID - <https://pm4id.org/>
- Open Ed Reader- <https://openedreader.org/>

article

discussion

edit

history

protect

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INST 6000 Syllabus Fall 2006

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Facilitators

[\[edit\]](#)

Name: David Wiley

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Phone: 435.797.7562

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iChat: educommons@mac.com

Face-to-Face / IM Office Hours: Throughout the day most days

Name: Marie Duncan

Room: Ed 272

Phone: 435.797.0444

Email: eidosabi[at]gmail[dot]com

Face-to-Face Office Hours: Tuesday 10:00 - 11:30

Course Description

[\[edit\]](#)

Considers the present, past, and future of instructional technology, while helping individual student to develop personal understanding of and orientation to the field.

Required Textbook

[\[edit\]](#)

There is no required textbook for this class. All materials are either available online or will be provided in class. The following resources are excellent general collections of instructional technology material:

- Week 2: Blogs, RSS, Microblogging, Wikis

- Tuesday

- Free blog hosts: [Wordpress](#), [Blogger](#)
 - Videos - [Blogs in Plain English](#), [RSS in Plain English](#), [Twitter in Plain English](#)
 - RSS - [Wikipedia entry for RSS](#)
 - Feed readers: [Google Reader \(web-based\)](#), [NetNewsWire \(Mac\)](#) and [FeedDemon \(Win\)](#)
 - [Twitter](#), also [Twitter on Wikipedia](#)

- ASSIGNMENTS - Demo how we can teach ourselves the key principles of blogging. Teach each other about RSS feeds, google reader and other helpful blogging tips. If you know a lot about a specific form of public Internet communication, prepare to share the basics of its operation and some of the ways that your medium could possibly be utilized to share the gospel.
 - ASSIGNMENTS - (1) Explore the websites linked above. (2) Create a blog on one of the free blog hosts above (skip this step if you already have a blog you intend to use for the class). (3) Add the address of your blog to this page using the Edit tab above. (4) Write a blog post in which you describe your personal history of social media use. Why have you joined the sites you belong to? What do you do when you're on those sites? Reflect on Elder Ballard's call for members of the church to "join the conversation." Do you think sharing the gospel online would be harder than sharing it face to face? Why or why not? (10 points)

- Thursday Jan. 14th

- [Wikipedia v. Encyclopedia Britannica](#)
 - [Wikipedia](#), [Wikieducator](#)
 - [Wikipedia Community Editing Guidelines](#)
 - [LDS Media blog on wikis](#)
 - [Murder, Madness, and Mayhem](#)
 - ASSIGNMENTS - (1) Explore the websites linked above. (2) Using the Discussion tab and the History tab (particularly the Compare Selected Versions feature) at the top of the Wikipedia entry on the [The Church of Jesus Christ of Latter-day Saints](#), explore the manner in which the Wikipedia entry on the Church has evolved. If you feel so inclined, improve this Wikipedia article or another of your choosing in a small way. (3) Write a blog post explaining your reflections and thoughts on the dynamics collaborative authorship in an open wiki. Also, describe any improvements you made to



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The Reusability Paradox

A CONFERENCE ROOM FULL OF PEOPLE

R: Good to see everyone again! S called ahead to say he was running a little late.

O: Good to be here again!

D: I don't think I've ever been part of a group where everyone showed up on time.

V: Well, this *is* only our second meeting. (General laughter)

R: I'm just glad you all came back. I was wondering if you got anything out of that first meeting.

V: Yes, of course! We wouldn't have taken time away from work to come back if we didn't expect this meeting to be extremely valuable.

C and D: (In unison) Riiiiight.

D: (Trying to look angelic) I would *never* take time away from work if it weren't for something 'extremely valuable'... like World of Warcraft. (More laughter)

R: Ok, ok. I want to bring us back to the topic of learning objects tonight, and specifically, to the question of the size of learning objects. Also known as the granularity question.

O: I thought we agreed last time that our definition of learning object was going to depend on the specific situation we find ourselves in?

C: Are we going to find out tonight how big a learning object should be? My manager keeps asking me that question.

R: Well, I think we're going to talk through some of the key issues that help people make that decision...

V: But we're not going to make the decision for you.

R: I want to suggest a topic to get our conversation going tonight: the fundamental tension between using and reusing.

C: What on earth is that supposed to mean?

Undergraduate Students

- Murder, Madness, Mayhem: Latin American Literature in Translation -
[https://en.wikipedia.org/wiki/Wikipedia:WikiProject Murder Madness and Mayhem](https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Murder_Madness_and_Mayhem)
- Robin's work

Middle and High School Students

A Preliminary Exploration of the Relationships Between Student-Created OER, Sustainability, and Student Success at the Secondary Level

David Wiley, DeLaina Tonks,
Sarah Weston, and Ashley Webb

IRRODL, forthcoming



Mountain Heights
ACADEMY



Mountain Heights
ACADEMY

Online, public charter school

- Opened in 2009 as Open High School of Utah
- 7-12 grades
- 575 full-time students
- 200 part-time students



Mountain Heights
ACADEMY

A Good Fit. For All Kinds
of Students.



CC-BY MountainHeightsAcademy

Research Context

- Course on Digital Photography
- Data covering 181 middle and high school students over 4 years
- Teacher, course assignments, and grading rubrics remained stable over the four years

Methodology

- Post-hoc design
- Students were invited to create / remix open tutorials, study guides, and games
- Extra credit or TA credit
- From no student-created OER to 10% of the course over four years
- Compare student grades on course assignments

PHOTOGRAPHY NOTES: Photography Genres

Level 3

I. Action Shot Photography

A. WATCH: Action Shot Photography Presentation

1. When you photograph, have a goal in mind
2. Make sure you have the right settings for the results you want
3. Fast shutter speed will freeze images in time, making things sharp and clear. A slower shutter speed will give you a motion blur.
4. For very slow shutter speeds use a tripod.
5. Remember there is a delay called shutter lag, it's the delay when you press the button and the shutter actually goes to record the shot.
6. There is a shutter lag because of light metering and auto focusing. DSLR's will have less of a shutter lag than a point and shoot.
7. How to lessen the delay push your camera button half way down to focus, when ready to take the picture press it down the rest of the way.
8. During panning, the camera is moved in the same direction as the subject, therefore you get a sharp focus and a blurred background.

HIDDEN BEAUTY PHOTOGRAPHY

HOME CONTACT ABOUT PRICING & BOOKING ALL SERVICES

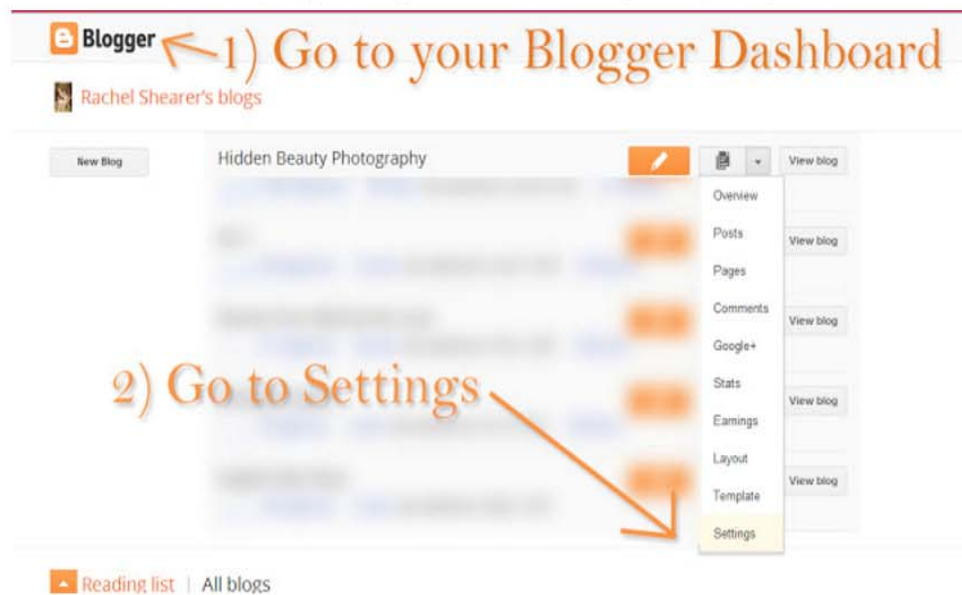
Monday, January 28, 2013

Posting Comments

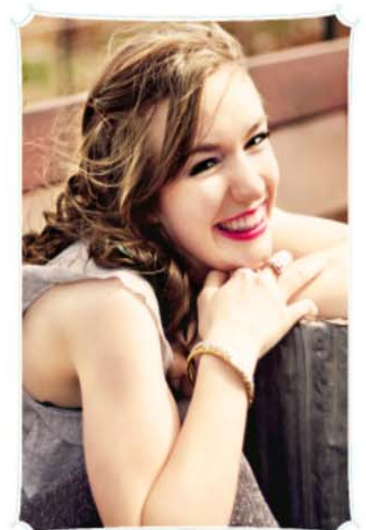
If you're in my photography class (or even if you're not, and want to know how to make it so that people don't have to use the word verification to comment on your posts) PLEASE read this!

I know I'm not the only one that gets annoyed to death with those 'please verify that you're not a robot' word verification things. And in our photography class, when we have to comment on other people's blogs, its so time consuming to have to do that every time! So please, consider (and then do) what I'm going to tell you how to do... turn it off!

First, go to your Blogger Dashboard, then to your blog settings



Then go to your 'Posts and Comments'



Hey there! My name is Rachel; self-proclaimed girly-girl and photography geek! This blog is a place for all things me, whether that be photography or a review on something pretty I love! Stick around and chances are we'll end up friends!
Etc. etc. etc. When I

WATCH: DOF, ISO, Shutter, and Aperture Review

Watch the following presentation to refresh your memory on DOF, ISO, Shutter, and Aperture!

DOF

Depth of field is the amount of distance between the nearest and farthest objects that appear in acceptably sharp focus in a photograph.

The bigger lens opening (aperture) used (like $f/2.8$).

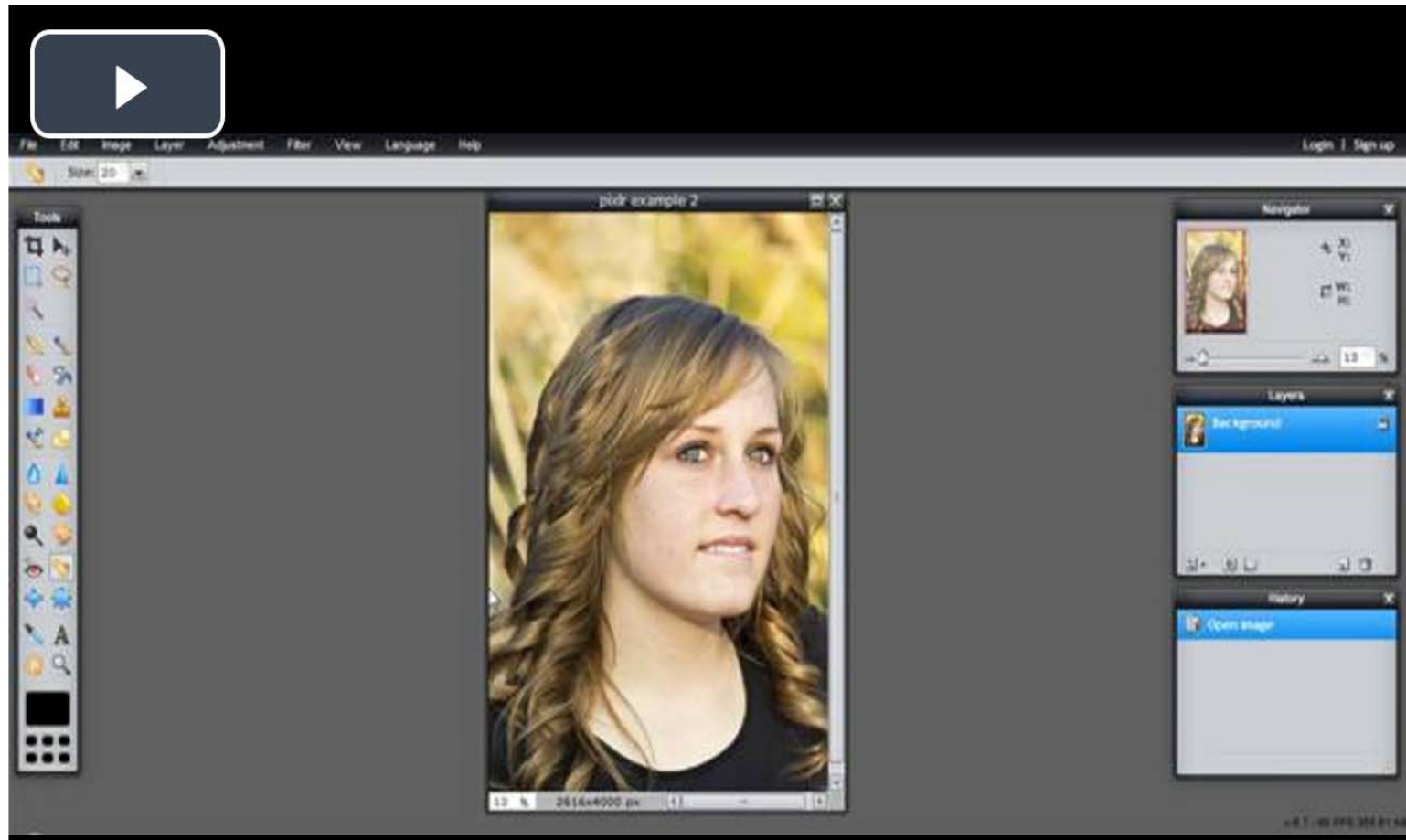


(Picture taken at midday ISO 100 f-stop 11 shutter speed 1/12)

WATCH: Editing a Portrait

The following two videos are how ShiAnne edits her photos when she does portrait photography. Watch how she uses the different tools on the toolbar, as well as the overlay layer effects. Just remember that this is what ShiAnne has found that works best for her! As you become more experienced with image editing, you will be able to try things and come up with a portrait editing system that works for you too, which may or may not be similar to ShiAnne's method!

Part 1:



This gimp video covers: selections, adding, replacing, intersection, and other modes, feather edges, rounded edges, free select. Follow along!



	2011-2012	2014-2015			
	(<u>n</u> = 103)	(<u>n</u> = 78)	<u>t</u>	<u>p</u>	<u>p</u> < 0.05
Filters	0.591	0.766	-2.617	0.010	*
Popping	0.517	0.686	-2.387	0.018	*
Lenses	0.554	0.706	-2.511	0.013	*
Shutter Speed and ISO	0.592	0.731	-2.166	0.032	*
Pixlr	0.587	0.718	-1.850	0.066	
Cropping	0.728	0.831	-1.695	0.091	
Light and Exposure	0.587	0.586	0.004	0.997	
Camera Modes	0.715	0.714	0.015	0.988	
Black and White	0.746	0.733	0.209	0.834	
Rules of Composition	0.824	0.708	1.756	0.081	
<i>All Assignments</i>	0.638	0.719	-3.829	0.000	*

US college students spend
approximately 40 million hours
doing homework every year



Reclaiming and Sustaining

1. Our current model of producing OER is *unsustainable* (e.g., \$500k - \$1M / textbook).
2. In the US alone, undergraduates spend about 40M hours per year on homework that is mostly *thrown away*.
3. Can students sustainably create OER that supports learning both by them *and other students*? YES.

Practical Considerations, 1

- Talking to students about open licensing
- Providing alternatives
- Talking to students about digital identity
- Merging student OER into the "official" course OER

Practical Considerations, 2

- Keeping your course OER outside the LMS (public!)
- Managing attribution
- Time, time, time
- Prioritizing contributions -
<http://lumenlearning.com/how/learning-lab/oer2/>

Conversation!

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